

What is claimed is:

1. A liquid distributor comprising

at least one channel for receiving a flow of liquid, said channel having a plurality of outlet apertures at longitudinally spaced apart points for an outflow of liquid from said channel in a plurality of streams;

an areal guide means extending below said channel to receive and laterally disperse at least one of the streams of liquid flowing from said apertures of said channel, said guide means having a drip edge at a lower end for dispensing drops of the liquid received thereon along longitudinally spaced apart points; and

at least one gutter disposed below said channel with said guide means passing therethrough, said gutter having a throttle means for distributing the liquid descending on said guide means by means of a hydrodynamic balance.

2. A liquid distributor as set forth in claim 1 wherein said gutter is disposed in parallel to said channel.

3. A liquid distributor as set forth in claim 1 wherein said gutter is disposed in perpendicular relation to said channel.

4. A liquid distributor as set forth in claim 1 wherein said gutter includes a pair of walls defining said throttle means.

5. A liquid distributor as set forth in claim 4 wherein said walls define a downwardly tapering region and a gap with said guide means disposed in and extending through said gap, said guide means being in contact with each said wall.

6. A liquid distributor as set forth in claim 5 wherein said guide means is a mesh having a fine mesh structure for distribution of a liquid with low viscosity.
7. A liquid distributor as set forth in claim 5 wherein said guide means is a mesh having a coarse mesh structure to define broad gaps between said mesh and said walls of said gutter for distribution of a liquid with high viscosity.
8. A liquid distributor as set forth in claim 5 wherein said walls of said gutter are made of sheet metal.
9. A liquid distributor as set forth in claim 5 wherein said guide means is a metal mesh.
10. A liquid distributor as set forth in claim 5 wherein said drip edge of said guide means has a plurality of recesses at spaced apart intervals.
11. A liquid distributor as set forth in claim 1 further comprising a second guide means extending between said channel and said gutter for directing said streams of liquid from said channel towards said gutter.
12. A liquid distributor as set forth in claim 11 wherein said gutter includes a pair of walls defining said throttle means and said second guide means is an extension of one of said walls.
13. A liquid distributor as set forth in claim 1 wherein said outlet apertures in said channel are spaced apart a maximum distance of 1 meter and are sized to deliver liquid at a rate of from 1 to 30 liters per hour.
14. A liquid distributor as set forth in claim 1 wherein at least one of said outlet apertures in said channel is a tubular guide organ for directing liquid in a helical path onto said guide means.

15. A liquid distributor comprising

a primary distribution stage including a plurality of channels for receiving liquid, each said channel having a plurality of outlet apertures at longitudinally spaced apart points for an outflow of liquid from said channel in a plurality of streams;

a plurality of areal guide means, each said guide means extending below a respective one of said channels to receive and laterally disperse at least one of the streams of liquid flowing from said apertures of said channel, each said guide means having a drip edge at a lower end for dispensing drops of the liquid received thereon along longitudinally spaced apart points; and

a secondary distribution stage below said primary distribution stage, said secondary distribution stage having a plurality of gutters, each said gutter being disposed below at least one of said channels with said guide means passing therethrough, said gutter having a throttle means for distributing the liquid descending on said guide means by means of a hydrodynamic balance.

16. A liquid distributor as set forth in claim 15 wherein said gutter includes a pair of walls defining said throttle means and wherein said walls define a downwardly tapering region and a gap with said guide means disposed in and extending through said gap, said guide means being in contact with each said wall.

17. A column comprising

a structured packing ; and

a liquid distributor disposed above said packing for distributing liquid over and onto said packing, said distributor having a primary distribution stage including a plurality of channels for receiving liquid, each said channel having a plurality of outlet apertures at longitudinally spaced apart points for an outflow of liquid from said

channel in a plurality of streams; a plurality of areal guide means, each said guide means extending below a respective one of said channels to receive and laterally disperse at least one of the streams of liquid flowing from said apertures of said channel, each said guide means having a drip edge at a lower end for dispensing drops of the liquid received thereon along longitudinally spaced apart points onto said packing; and a plurality of gutters, each said gutter being disposed below at least one of said channels with said guide means passing therethrough, said gutter having a throttle means for distributing the liquid descending on said guide means by means of a hydrodynamic balance.

18. A column as set forth in claim 17 wherein each said gutter is disposed in parallel to and below a respective one said channels.

19. A column as set forth in claim 17 wherein each said gutter is disposed in perpendicular relation to a plurality said channels.

20. A column as set forth in claim 17 wherein each said gutter includes a pair of walls defining said throttle means and wherein said walls define a downwardly tapering region and a gap with a respective said guide means disposed in and extending through said gap, said respective guide means being in contact with each said wall.